

**SUMMARY OF POTENTIAL HYDROLOGICAL RESOURCE AND
WATER QUALITY CONFLICTS BY ALTERNATIVE**

APPENDIX 3.14-B**SUMMARY OF POTENTIAL HYDROLOGICAL RESOURCE AND
WATER QUALITY CONFLICTS BY ALTERNATIVE****IMPACT RATINGS**

The potential impacts of the Modal and HST Alternatives on water resources are characterized as high, medium, or low compared to the No Project Alternative. The impact rating system discussed herein is an analytical tool used to facilitate comparisons between alternatives. The impacts in each of the five regions were assigned a sensitivity rating of high, medium, or low relative to the baseline environment of the region. The upper and lower limits on the ranges for each of the sensitivity ratings were assigned for each of the regions based on hydrologic and water quality characteristics unique to each region. A rating of high indicates the extent of a resource or area of a resource potentially affected by an alternative. For the various resources, high refers to 101 ac (41 ha) or more of floodplain in the study area potentially affected; 401 ac (162 ha) or more of groundwater basin in the study area potentially affected; 2,001 linear ft (610 km) or more of rivers/streams crossed in the study area; 5,001 ac (2024 ha) or more of erodible soil in the study area potentially affected; and 11 ac (4.4 ha) or more of lakes potentially affected in the study area. Medium and low impacts are proportionately smaller.

Table 3.14-B-1 lists the impacts by region and their respective ratings. Impact ratings are further defined by region at the end of the table.

Table 3.14-B-1
Potential Hydrological Resource and Water Quality Conflicts

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes¹ (Acres)	Erosion (Acres)	Groundwater (Acres)
NO PROJECT ALTERNATIVE					
All Regions	Not Known				
MODAL ALTERNATIVE					
Bay Area to Merced					
Fremont/Newark to US-101	High (126)	High (8,230)	(0)	Med (80)	Med
Gilroy to SR-152	Low (6)	High (2,920)	(0)	Low (0)	Med
I-238 to Fremont/Newark	Low (4)	High (4,595)	(0)	Low (0)	Med
I-5 to SR-99	High (126)	High (12,442)	(0)	Low (0)	Med
I-580/SR-120 to SR-152	Low (12)	High (13,618)	(1)	High (192)	Med
I-80 to I-238	Low (7)	High (1,263)	(0)	Low (0)	Med
I-80 to Stockton	High (860)	High (27,772)	(7)	Low (0)	Med
I-880 to I-5 (Sacramento)	High (294)	High (27,228)	(0)	High (513)	Med
I-880 to I-5 (via-238)	Med (25)	High (21,671)	(0)	High (478)	Med
Merced to SR-152	High (269)	High (3,635)	(0)	Low (0)	Med
Modesto to Merced	Med (95)	High (5,198)	(0)	Low (0)	Med
Redwood City to I-880	High (176)	High (8,590)	(0)	High (478)	Med
SFO to Redwood City	Med (87)	High (7,979)	(4)	High (336)	Med

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes ¹ (Acres)	Erosion (Acres)	Groundwater (Acres)
SR-120 to Modesto	Low (7)	High (2,409)	(0)	Low (0)	Med
SR-152 to Fresno	Med (95)	High (4,461)	(0)	Low (0)	Med
SR-152 to SR-99	Low (1)	High (1,960)	(0)	Med (69)	Med
Sacramento to SR-120	High (306)	High (13,121)	(0)	Low (0)	Med
San Francisco to I-880	Med (30)	High (6,095)	(11)	Low (54)	Med
San Francisco to San Francisco Airport (SFO)	Med (21)	High (2,146)	(11)	Med (259)	Med
San Jose to Gilroy	High (132)	High (12,021)	(0)	High (473)	Med
Stockton to I-580/SR-120	Med (63)	High (5,730)	(0)	Low (0)	Med
US 101 to San Jose	Med (13)	Med (103)	(0)	Low (22)	Med
Total					(14,428)
Sacramento to Bakersfield					
Sacramento to Stockton	High (899)	High (43,785)	High (7)	N/A	Low (4,197)
Stockton to Modesto	Low (58)	Med (15,285)	Low (0)	N/A	Low (1,281)
Modesto to Merced	Med (153)	Low (9,673)	Low (0)	N/A	Low (1,785)
Merced to Fresno	High (585)	High (4,6261)	High (10)	N/A	Low (4,926)
Fresno to Tulare	Low (86)	Med (14,714)	Low (0)	N/A	Low (1,526)
Tulare to Bakersfield	High (454)	High (31,790)	Low (0)	N/A	Low (5,660)
Sacramento International Airport	N/A	N/A	N/A	N/A	N/A
Bakersfield to Los Angeles					
I-5: SR-99 to SR-14	Med (76)	High (28,364)	High (14)	Med (1,559)	High (415)
I-5: SR-14 to I-405	Low (0)	Med (1,673)	Low (1)	Low (61)	Low (36)
I-5: I-405 to Burbank	Low (14)	High (2,799)	Low (1)	Low (371)	Med (358)
I-5: Burbank to LA Union Station	Low (2)	Low (499)	Low (0)	Low (181)	Low (89)
SR-58/14: SR-99 to Palmdale	Low (0)	Low (0)	Low (0)	Low (0)	Low (0)
SR-14: Palmdale to I-5	Low (33)	High (13,027)	High (16)	Low (844)	Med (378)
Burbank Airport	Low (0)	Low (0)	Low (0)	Med (844)	High (1,387)
Los Angeles to San Diego via Inland Empire					
Union Station to March Air Reserve Base	(35)	High (20,730)	(0)	Med (150)	Med
March Air Reserve Base to Mira Mesa	(169)	High (33,650)	(0)	High (465)	Low
Mira Mesa to San Diego	(34)	High (63,830)	(7)	Low (0)	Low
Ontario International Airport	N/A	N/A	N/A	N/A	N/A
San Diego International Airport	N/A	N/A	N/A	N/A	N/A
Los Angeles to San Diego via Orange County					
LAX to Union Station	N/A	N/A	N/A	N/A	N/A
Union Station to Irvine	N/A	N/A	N/A	N/A	N/A

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes ¹ (Acres)	Erosion (Acres)	Groundwater (Acres)
Union Station to Fullerton Station	(0)	(835)	(0)	(95)	Low
Fullerton Station to Irvine Station	(115)	(575)	(0)	(0)	Low
Irvine Station to San Juan Capistrano City Limits	(20)	(1,630)	(0)	(200)	Low
San Juan Capistrano	(10)	(1,700)	(0)	(35)	Low
Dana Point/San Clemente	(0)	(745)	(0)	(250)	Low
Camp Pendleton	(0)	(940)	(0)	(205)	Low
Oceanside/Carlsbad	(15)	(660)	(7)	(210)	Low
Encinitas/Solana Beach	(5)	(125)	(5)	(140)	Low
Del Mar	(30)	(320)	(0)	(130)	Low
I-5/I-805 Split to Highway 52	(10)	(300)	(0)	(35)	Low
Highway 52 to Santa Fe Depot	(5)	(425)	(0)	(130)	Low
Long Beach Airport	N/A	N/A	N/A	N/A	N/A
HIGH-SPEED TRAIN ALTERNATIVE					
Bay Area to Merced					
<i>San Jose to Merced</i>					
Gilroy Option	High (589)	High (451,960)	(60)	High (1,507)	Low
145 kph Station Speed Option	High (575)	High (453,042)	(60)	High (1,529)	Low
Gilroy Bypass Option	High (482)	High (436,560)	(107)	High (1,529)	Low
Northern Tunnel Option	High (125)	High (249,364)	(1)	High (1,679)	Low
Tunnel Under Park Option	High (171)	High (312,359)	(0)	High (1,548)	Low
Minimize Tunnel Option	High (180)	High (296,446)	(3)	High (1,558)	Low
<i>Stations:</i>					
Los Banos Station	N/A	N/A	N/A	N/A	N/A
Gilroy Station	N/A	N/A	N/A	N/A	N/A
Morgan Hill Station	N/A	N/A	N/A	N/A	N/A
San Jose/Diridon Station	N/A	N/A	N/A	N/A	N/A
<i>San Jose to San Francisco</i>					
Existing Caltrain Corridor	High (200)	High (73,026)	(79)	High (1,118)	Low
<i>Stations:</i>					
Santa Clara Station	N/A	N/A	N/A	N/A	N/A
Palo Alto Station	N/A	N/A	N/A	N/A	N/A
Redwood City Station	N/A	N/A	N/A	N/A	N/A
Millbrae/SFO Station	N/A	N/A	N/A	N/A	N/A
4th and King Station	N/A	N/A	N/A	N/A	N/A
Transbay Terminal Station	N/A	N/A	N/A	N/A	N/A

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes ¹ (Acres)	Erosion (Acres)	Groundwater (Acres)
<i>San Jose to Oakland</i>					
I-880 Option	High (180)	High (121,225)	(119)	Low (191)	Low
Mulford Option	High (206)	High (197,031)	(95)	High (207)	Low
<i>Stations:</i>					
Auto Mall Parkway Station	N/A	N/A	N/A	N/A	N/A
Union City Station	N/A	N/A	N/A	N/A	N/A
Oakland Airport/Coliseum Bart Station	N/A	N/A	N/A	N/A	N/A
12th Street/City Center Station	N/A	N/A	N/A	N/A	N/A
West Oakland Station	N/A	N/A	N/A	N/A	N/A
Sacramento to Bakersfield					
<i>Sacramento to Stockton</i>					
UPRR (A1)	Med (371)	High (57,843)	High (1)	N/A	Low (2,320)
UPRR (A2)	Med (459)	High (52,267)	Low (0)	N/A	Low (2,893)
BNSF (A3)	High (610)	Med (35,644)	High (1)	N/A	Low (2,222)
BNSF (A4)	High (644)	Med (27,434)	Low (0)	N/A	Low (2,392)
UPRR (A5)	Med (276)	High (54,717)	High (1)	N/A	Low (2,085)
UPRR (A6)	Med (252)	High (52,628)	Low (0)	N/A	Low (2,135)
BNSF (A7)	High (515)	Med (32,517)	High (1)	N/A	Low (1,987)
BNSF (A8)	High (491)	Med (30,429)	Low (0)	N/A	Low (2,037)
<i>Stations & Maintenance Facilities:</i>					
Sacramento Downtown Depot	Low (0.7)	Low (0)	Low (0)	N/A	Low (41)
Power Inn Road Station (BNSF Option)	Med (16)	Low (0)	Low (0))	N/A	Low (18)
Power Inn Road Station (UPRR Option)	Med (18)	Low (0)	Low (0)	N/A	Low (18)
Stockton Ace Downtown Station	Low (0)	Low (0)	Low (0)	N/A	Low (19)
Sacramento Maintenance Facility (BNSF Option)	High (48)	High (5,970)	Low (0)	N/A	Low (59)
Sacramento Maintenance Facility (UPRR Option)	High (47)	Med (617)	Low (0)	N/A	Low (63)

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes ¹ (Acres)	Erosion (Acres)	Groundwater (Acres)
Stockton to Modesto					
UPRR (B1)	Low (14)	Med (10,394)	Low (0)	N/A	Low (822)
BNSF (B2)	Low (84)	Med (12,556)	Low (0)	N/A	Low (418)
<i>Stations:</i>					
Modesto Downtown Station	Low (0)	Low (0)	Low (0)	N/A	Low (16)
Modesto Briggsmore Station	Low (0)	Low (0)	Low (0)	N/A	Low (21)
Modesto to Merced					
UPRR (C1)	Low (133)	Med (13,773)	Low (0)	N/A	Low (1,676)
UPRR (C2)	Med (413)	Med (17,843)	Low (0)	N/A	Low (1,985)
UPRR (C3)	Low (155)	Med (12,021)	Low (0)	N/A	Low (1,418)
UPRR (C4)	Med (442)	Med (14,406)	Low (0)	N/A	Low (1,734)
BNSF (C5)	Med (256)	Med (14,986)	Low (0.4)	N/A	Low (983)
BNSF (C6)	High (536)	Med (18,834)	Low (0.4)	N/A	Low (1,276)
BNSF (C7)	Med (257)	Med (13,947)	Low (0.4)	N/A	Low (983)
BNSF (C8)	High (544)	Med (16,108)	Low (0.4)	N/A	Low (1,284)
UPRR (C9)	Med (289)	Low (6,494)	Low (0)	N/A	Low (906)
UPRR (C10)	Med (296)	Low (4,812)	Low (0)	N/A	Low (913)
BNSF (C11)	Med (301)	Med (16,124)	Low (0.4)	N/A	Low (998)
BNSF (C12)	Med (309)	Med (14,441)	Low (0.4)	N/A	Low (1,005)
BNSF (C13)	Med (311)	Med (17,541)	Low (0.4)	N/A	Low (1,211)
BNSF (C14)	Med (266)	Med (16,403)	Low (0.4)	N/A	Low (1,196)
BNSF (C15)	Med (318)	Med (15,859)	Low (0.4)	N/A	Low (1,218)
BNSF (C16)	Med (266)	Med (15,364)	Low (0.4)	N/A	Low (1,196)
<i>Stations:</i>					
Merced Downtown Station	High (18)	Low (0)	Low (0)	N/A	Low (18)
Merced Municipal Airport Station	Med (12)	Low (0)	Low (0)	N/A	Low (12)
Castle Air Force Base Station	Low (0)	Low (0)	Low (0)	N/A	Low (13)

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes ¹ (Acres)	Erosion (Acres)	Groundwater (Acres)
Merced to Fresno					
BNSF (D1)	Med (321)	Med (10,129)	Low (0)	N/A	Low (1,521)
BNSF (D2)	Med (326)	Med (17,646)	Low (0)	N/A	Low (2,143)
BNSF (D3)	Med (320)	Low (77,15)	Low (0)	N/A	Low (1,390)
BNSF (D4)	Med (325)	Med (12,756)	Low (0)	N/A	Low (1,960)
UPRR (D5)	Med (336)	Low (6,140)	Low (0)	N/A	Low (1,326)
UPRR (D6)	Med (343)	Med (10,745)	Low (0)	N/A	Low (1,864)
UPRR (D7)	Med (338)	Low (8,554)	Low (0)	N/A	Low (1,457)
UPRR (D8)	Med (345)	Med (15,636)	Low (0)	N/A	Low (2,047)
<i>Stations:</i>					
Fresno Downtown Station	Med (13)	Low (0)	Low (0)	N/A	Low (13)
Fresno to Tulare					
UPRR (E1)	Low (200)	Med (15,655)	Low (0)	N/A	Low (753)
BNSF (E2)	Low (5)	Low (5,392)	Low (0)	N/A	Low (721)
<i>Stations:</i>					
Visalia Airport Station	Low (0)	Med (1,250)	Low (0)	N/A	Low (12)
Hanford Station	Low (0)	Low (0)	Low (0)	N/A	Low (11)
Tulare to Bakersfield					
UPRR (F1)	Low (231)	Med (23,295)	Low (0)	N/A	Low (1,950)
UPRR (F2)	Low (243)	Med (23,042)	Low (0)	N/A	Low (1,747)
UPRR (F3)	Low (239)	Med (20,224)	Low (0)	N/A	Low (1,958)
UPRR (F4)	Low (235)	Med (19,972)	Low (0)	N/A	Low (1,755)
BNSF (F5)	Low (231)	Med (40,259)	Low (0)	N/A	Low (2,157)
BNSF (F6)	Low (227)	Med (40,006)	Low (0)	N/A	Low (1,954)
UPRR (F7)	Low (223)	Med (23,295)	Low (0)	N/A	Low (1,950)
UPRR (F8)	Low (219)	Med (23,042)	Low (0)	N/A	Low (1,747)
UPRR (F9)	Low (215)	Med (20,224)	Low (0)	N/A	Low (1,958)

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes ¹ (Acres)	Erosion (Acres)	Groundwater (Acres)
UPRR (F10)	Low (211)	Med (19,972)	Low (0)	N/A	Low (1,755)
BNSF (F11)	Low (207)	Med (40,259)	Low (0)	N/A	Low (2,157)
BNSF (F12)	Low (203)	Med (40,006)	Low (0)	N/A	Low (1,954)
UPRR (F13)	Low (200)	Med (23,465)	Low (0)	N/A	Low (1,779)
UPRR (F14)	Low (196)	Med (20,395)	Low (0)	N/A	Low (1,787)
UPRR (F15)	Low (192)	Med (26,132)	Low (.38)	N/A	Low (2,375)
UPRR (F16)	Low (188)	Med (25,882)	Low (.38)	N/A	Low (2,172)
UPRR (F17)	Low (184)	Med (23,058)	Low (.38)	N/A	Low (2,382)
UPRR (F18)	Low (180)	Med (22,806)	Low (.38)	N/A	Low (2,179)
UPRR (F19)	Low (176)	Med (26,722)	Low (0)	N/A	Low (2,175)
UPRR (F20)	Low (172)	Med (26,473)	Low (0)	N/A	Low (1,972)
UPRR (F21)	Low (168)	Med (23,649)	Low (0)	N/A	Low (2,183)
UPRR (F22)	Low (164)	Med (23,396)	Low (0)	N/A	Low (1,980)
BNSF (F23)	Low (160)	Med (38,215)	Low (.38)	N/A	Low (2,168)
BNSF (F24)	Low (156)	Med (37,966)	Low (.38)	N/A	Low (1,965)
<i>Stations and Maintenance Facilities:</i>					
Bakersfield Airport Station	Low (0)	Low (0)	Low (0)	N/A	Low (29)
Golden State Station	Low (0)	Low (0)	Low (0)	N/A	Low (19)
Truxton (Union Avenue) Station	Low (0)	Low (0)	Low (0)	N/A	Low (12)
Truxton (Amtrak) Station	Low (0)	Med (895)	Low (0)	N/A	Low (33)
Main Maintenance Facility (BNSF Option)	Low (0)	Low (0)	Low (0)	N/A	Low (140)
Main Maintenance Facility (UPRR Option)	Low (0)	Low (0)	Low (0)	N/A	Low (140)
Bakersfield to Los Angeles					
<i>Bakersfield to Sylmar</i>					
Union Avenue Corridor	Low (28)	High (8,147)	Low (0)	Low (659)	High (711)
I-5: Tehachapi Corridor	High (135)	High (22,344)	High (18)	Med (1,356)	Med (349)

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes ¹ (Acres)	Erosion (Acres)	Groundwater (Acres)
Wheeler Ridge Corridor	High (273)	High (3,019)	Low (0)	Low (667)	High (273)
SR 58 Corridor	Med (76)	High (29,399)	Low (0)	Med (1,327)	High (597)
Soledad Canyon Corridor	Med (93)	High (26,647)	Low (0)	Low (835)	Med (330)
Antelope Valley Corridor	High (148)	Med (1,280)	Low (0)	Low (431)	High (431)
<i>Stations:</i>					
Palmdale Siding	Low (0)	High (6,586)	Low (0)	Low (76)	Low (76)
Sylmar to Downtown Burbank					
Metrolink/UPRR: Sylmar Station to Metrolink	Low (0)	Low (200)	Low (0)	Low (4)	Low (72)
Burbank Airport to Downtown	Low (0)	Low (0)	Low (0)	Low (8)	Low (8)
<i>Stations:</i>					
Metrolink/UPRR: Sylmar Station North	Low (0)	Low (250)	Low (0)	Low (4)	Low (4)
Metrolink/UPRR: Sylmar Station Siding	Low (0)	Low(200)	Low (0)	Low (75)	Low (75)
Burbank Airport Siding	Low (1)	Low (0)	Low (0)	Low (120)	Low (120)
I-5: Burbank Downtown Siding	Low (4)	Med (1,384)	Low (0)	Low (44)	Low (44)
Downtown Burbank to Los Angeles					
I-5: Glendale	Low (10)	Low (0)	Low (0)	Low (30)	Low (30)
I-5: Silverlake Aerial/Cut and Cover Option	Low (0)	Low (0)	Low (0)	Low (92)	Low (43)
Metrolink/UPRR: Glendale	Low (0)	Low (0)	Low (0)	Low (73)	Low (73)
Metrolink/UPRR: Over and Under I-5 and SR 110	Low (0)	Low (0)	Low (0)	Low (32)	Low (32)
Metrolink/UPRR: Over I-5 and SR 110	Low (0)	Med (1,524)	Low (0)	Low (67)	Low (67)
Metrolink/UPRR: Under I-5 and SR 110	Low (0)	Med (1,558)	Low (0)	Low (69)	Low (69)
LAUS Existing: South	Low (0)	Low (420)	Low (0)	Low (12)	Low (12)
LAUS Existing: East	Low (0)	Low (318)	Low (0)	Low (26)	Low (26)
South Connection	Low (0)	Low (0)	Low (0)	Low (52)	Low (52)
East Connection	Low (0)	Low (0)	Low (0)	Low (41)	Low (38)
LAUS East Bank: North	Low (0)	Med (1,650)	Low (0)	Low (27)	Low (27)
<i>Stations:</i>					
Burbank Downtown Siding	Low (1)	Low (30)	Low (0)	Low (30)	Low (30)
Metrolink/UPRR: Burbank Downtown Siding	Low (0)	Low (201)	Low (0)	Low (62)	Low (62)
LAUS Existing Siding	Low (0)	Low (0)	Low (0)	Low (18)	Low(18)
Maintenance Yard	Low (0)	Med (1,038)	Low (0)	Low (332)	Low (11)
LAUS South Siding	Low (0)	Low (200)	Low (0)	Low (34)	Low (0)

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes ¹ (Acres)	Erosion (Acres)	Groundwater (Acres)
LAUS East Bank Siding	Low (0)	Low (487)	Low (0)	Low (17)	Low (17)
Los Angeles to San Diego via Inland Empire					
<i>Union Station to March ARB</i>					
UP/Colton Line	(132)	High (20,750)	(2)	Med (119)	Med
UP/Colton Line via San Bernardino	(148)	High (15,470)	(2)	Med (119)	Med
UP/Riverside Line – UP/Colton Line	(57)	High (38,120)	(3)	Med (184)	Med
UP/Riverside Line – UP/Colton Line via San Bernardino	(115)	High (32,840)	High (3)	Med (184)	Med
<i>Stations:</i>					
El Monte Station	(1)	Low (0)	Low (0)	Low (0)	N/A
Pomona Station	(0)	Low (0)	Low (0)	Low (0)	N/A
Ontario Station	(0)	Low (0)	Low (0)	Low (0)	N/A
Colton Station	(0)	High (1,330)	High (0)	Low (0)	N/A
University of California Riverside Station	(0)	Med (690)	Med (0)	Low (0)	N/A
South El Monte Station	(0)	Med (950)	Med (0)	Med (42)	N/A
City of Industry Station	(0)	Low (0)	Low (0)	Med (47)	N/A
San Bernardino Station	(0)	Low (0)	Low (0)	Low (0)	N/A
<i>March ARB to Mira Mesa</i>					
San Jacinto to I-15 via Escondido	(112)	High (31,100)	High (7)	High (417)	Low
San Jacinto to I-15 via Escondido Transit Center	(112)	High (32,270)	High (7)	High (371)	Low
<i>Stations:</i>					
March ARB Station	(0)	Low (0)	Low (0)	Low (0)	N/A
Temecula Station	N/A	Med (640)	Med (0)	Low (0)	N/A
Escondido Station	N/A	Low (0)	Low (0)	Low (0)	N/A
Escondido Transit Center Station	N/A	Med (640)	Med (0)	Low (0)	N/A
Mira Mesa to San Diego					
I-15 to Coast via Miramar Road	(130)	Med (5,860)	Med (0)	Med (134)	Low
I-15 to Coast via Carroll Canyon	(162)	Med (5,130)	Med (0)	Med (134)	Low
I-15 to Qualcomm Stadium	(40)	Med (9,960)	Med (0)	Low (0)	Low
<i>Stations:</i>					
Mira Mesa Station	0	Low (0)	Low (0)	Low (0)	N/A
Qualcomm Stadium Station	(15)	Low (0)	Low (0)	Low (0)	N/A

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes ¹ (Acres)	Erosion (Acres)	Groundwater (Acres)
University Transit Center Station	(13)	Med (290)	Med (0)	Low (14)	N/A
San Diego International Airport Station	(0)	Low (0)	Low (0)	Low (0)	N/A
San Diego Station at Santa Fe Depot	(0)	Low (0)	Low (0)	Low (0)	N/A
Los Angeles to San Diego via Orange County—HST Corridor					
<i>Los Angeles International Airport to Union Station</i>					
LAX to Union Station	(5)	(1,300)	(0)	(210)	Low (at grade and elevated)/ Med (trenched)
<i>Stations:</i>					
LAX Station	0	N/A	N/A	(5)	High
<i>Union Station to Irvine</i>					
Union Station to Anaheim Station via UPRR	(15)	(650)	(0)	(0)	Low (at grade and elevated)/ Med (trenched, tunneled)
Union Station to Irvine Station via LOSSAN	(75)	N/A	N/A	(0)	Low
<i>Stations:</i>					
Norwalk Station	(0)	N/A	N/A	(0)	Low
Fullerton Station	(0)	N/A	N/A	(15)	Low
Anaheim Station	(15)	N/A	N/A	(0)	Low
Santa Ana Station	(0)	N/A	N/A	(0)	Low
Irvine Station	(5)	N/A	N/A	(0)	Low
Los Angeles to San Diego via Orange County—Conventional Rail Corridor					
<i>Union Station to Fullerton Station</i>					
4th Main Track	(10)	(675)	(0)	(220)	Low
<i>Fullerton Station to Irvine Station</i>					
At grade between Walnut Ave. and E. 17th St.	(65)	(2,590)	(0)	(20)	Low
Trench between Walnut Ave. and E. 17th St.	(65)	(2,590)	(0)	(20)	Low (at grade)/Med (trenched)
<i>Stations:</i>					
Fullerton Station	(0)	N/A	N/A	(15)	Low
Anaheim Station	(15)	N/A	N/A	(0)	Low

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes¹ (Acres)	Erosion (Acres)	Groundwater (Acres)
Santa Ana Station	(0)	N/A	N/A	(0)	Low
Irvine Station	(5)	N/A	N/A	(0)	Low
<i>Irvine Station to San Juan Capistrano City Limits</i>	No Improvements				
<i>San Juan Capistrano</i>					
Covered Trench/Cut-fill between Trabuco Creek and Avenida Aeropuerto	(20)	(820)	(0)	(30)	Low (at grade)/Med (trenching)
Tunnel along I-5 between SR-73 and Avenida Aeropuerto	(25)	(1,195)	(0)	(35)	Low (at grade)/Med (tunnel)
At grade and Open Trench along East Side of Trabuco Creek	(5)	(2,340)	(0)	(5)	Low
<i>Stations:</i>					
San Juan Capistrano	(0)	N/A	N/A	(0)	Low
<i>Dana Point/San Clemente</i>					
Dana Point Curve Realignment; San Clemente–Short Trench	(45)	(645)	(0)	(130)	Low (at grade)/Med (trench)
Dana Point Curve Realignment; San Clemente–Long Trench	(45)	(645)	(0)	(130)	Low (at grade)/Med (trench)
Dana Point Curve Realignment; San Clemente–Short Tunnel	(30)	(740)	(0)	(235)	Low (at grade)/Med (trench)
San Clemente–Long One-Segment Tunnel	(0)	(340)	(0)	(240)	Med (in trench)/tunnel not within CCBA
San Clemente–Long Two-Segment Tunnel	(0)	(340)	(0)	(240)	Med (in trench)/tunnel not within CCBA
<i>Stations:</i>					
San Clemente	(5)	(0)	(0)	(0)	Low
<i>Camp Pendleton</i>					
Double Tracking–San Onofre Power Plant to Oceanside City Limits	(0)	(940)	(0)	(0)	Low
Oceanside/Carlsbad					
Carlsbad–At grade	(15)	(1,300)	(7)	(95)	Low

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes ¹ (Acres)	Erosion (Acres)	Groundwater (Acres)
Carlsbad–Trench	(15)	(1,300)	(7)	(95)	Low (trenching not in CCBA)
<i>Stations:</i>					
Oceanside Station	(0)	N/A	N/A	(5)	Low
<i>Encinitas/Solana Beach</i>					
Encinitas–At grade	(20)	(1,615)	(3)	(160)	Low
Encinitas–Short Trench	(20)	(1,615)	(3)	(160)	Med
Encinitas–Long Trench	(20)	(1,615)	(3)	(160)	Med
<i>Stations:</i>					
Solana Beach Station	(0)	N/A	N/A	(15)	No impacts— not in CCBA
<i>Del Mar</i>					
Covered Trench on Bluffs	(75)	(3,025)	(2)	(125)	Med
Tunnel Under Camino Del Mar	(75)	(1,310)	(2)	(140)	Med – CCBA in the trenching areas not the tunnel
Tunnel along I-5	(35)	(1,520)	(.5)	(145)	L – not located in CCBA
<i>I-5/I-805 Split to Highway 52</i>					
Miramar Hill Tunnel	(15)	(455)	(0)	(35)	L—not located in CCBA
I-5 Tunnel	(35)	(320)	(0)	(30)	L—not located in CCBA
<i>Stations:</i>					
University Towne Centre	(0)	N/A	N/A	(25)	No impacts— not in CCBA
<i>Highway 52 to Santa Fe Depot</i>					
Curve Realignment; Double Tracking; Trench between Sassafras St. and Cedar St.	(15)	(1,475)	(0)	(75)	Low (bridges/at grade)/Med (trenching)
<i>Stations:</i>					
Santa Fe Depot	(0)	N/A	(2)	(0)	Low

Location	Floodplains (Acres)	Streams (Linear Feet)	Lakes ¹ (Acres)	Erosion (Acres)	Groundwater (Acres)
Impact Ratings Defined by Region					
Low					
Bay Area to Merced: Floodplains (<10 ac.); Streams (<100 linear ft); Lakes (<10 ac.); Erosion (<60 ac.); Groundwater (all HST)					
Sacramento to Bakersfield: Floodplains (<205 ac.); Streams (<9,845 linear ft); Lakes (<0.45 ac.); Erosion (none); Groundwater (<750 ac.)					
Bakersfield to Los Angeles: Floodplains (<50 ac.); Streams (<1000 linear ft); Lakes (<5 ac.); Erosion (<1000 ac.); Groundwater (<200 ac.)					
Los Angeles to San Diego via Inland Empire: Floodplains (none); Streams (alignment<5,000 linear ft, stations<100 linear ft); Lakes (alignment<1 ac., stations<1 ac.); Erosion (<100 ac.); Groundwater (none)					
Los Angeles to San Diego via Orange County: Floodplains (none); Streams (none); Lakes (none); Erosion (none); Groundwater (lower level improvements)					
MEDIUM					
Bay Area to Merced: Floodplains (10–100 ac.); Streams (100–1000 linear ft); Lakes (10–100 ac.); Erosion (60–100 ac.); Groundwater (all Modal)					
Sacramento to Bakersfield: Floodplains (250–475 ac.); Streams (9,845–42,650 linear ft); Lakes (0.45–0.85 ac.); Erosion (none); Groundwater (750–1,750 ac.)					
Bakersfield to Los Angeles: Floodplains (50-100 ac.); Streams (1,000–2,000 linear ft); Lakes (5–10 ac.); Erosion (1,000–5,000 ac.); Groundwater (200–400 ac.)					
Los Angeles to San Diego via Inland Empire: Floodplains (none); Streams (alignment 5,000–10,000 linear ft, stations 100–1,000 linear ft); Lakes (alignment 1–5 ac., stations 1–2 ac.); Erosion (100–200 ac.); Groundwater (none)					
Los Angeles to San Diego via Orange County: Floodplains (none); Streams (none); Lakes (none); Erosion (none); Groundwater (higher level improvements)					
High					
Bay Area to Merced: Floodplains (>100 ac.); Streams (>1000 linear ft); Lakes (>100 ac.); Erosion (>100 ac.); Groundwater (none)					
Sacramento to Bakersfield: Floodplains (>475 ac.); Streams (>42,650 linear ft); Lakes (>0.85 ac.); Erosion (none); Groundwater (>1,750 ac.)					
Bakersfield to Los Angeles: Floodplains (>100 ac.); Streams (>2000 linear ft); Lakes (>10 ac.); Erosion (>5,000 ac.); Groundwater (>400 ac.)					
Los Angeles to San Diego via Inland Empire: Floodplains (none); Streams (alignment>10,000 linear ft, stations >1,000 linear ft); Lakes (alignment >5 ac., stations > 2 ac.); Erosion (>200 ac.); Groundwater (none)					
Los Angeles to San Diego via Orange County: Floodplains (none); Streams (none); Lakes (none); Erosion (none); Groundwater (none)					